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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,104	04/14/2004	Brent K. Hyde	L3440/285208 (LV589)	6160

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EXAMINER

SELF, SHELLEY M

ART UNIT	PAPER NUMBER
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3725

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/824,104	HYDE, BRENT K.	
	Examiner	Art Unit	
	Shelley Self	3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention.

The drawings fail to clearly illustrate the structure of the disclosed invention. For example, page 7, lines 14-24 of the written disclosure mentions a frame being cut, a router, a bit and a wall, yet none of the elements/structure are clearly delineated with reference characters and lead lines within the drawings. Further throughout the written disclosure a router is referred to yet, none is clearly denoted and illustrated within the drawings. Figures 1-3 and 9-15 do not have any reference characters defining the structure. Clarification is necessary to facilitate a clear understanding of the disclosed invention.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following: *router* (clms. 1, 10-12), *shaft* (clm. 1), *cutter* (clm. 1), *guide bearing* (clm. 1), *wing cutter* (clms. 4-6), *frame members* (clm. 10-12), *joint elements* (clm. 10), *inside face* (cl. 10-12), *groove* (clm. 10, 11), *arcuate bearing surface* (clm. 10), *cutter axis* (clm. 1), *bearing follower* (clm. 11, 12), *panel* (clm. 12) and *tongue* (clm. 12) must be shown/denoted with reference character(s) or the feature(s) canceled from the claim(s). No new matter should be entered.

Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing

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sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 4-8, 11 and 12 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Neither the written disclosure nor the drawings provide support for a wing cutter or bearing follower as set forth in claims 4-8, 11 and 12.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 4-8 and 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claims 4-6 there is no antecedent basis for the term, "*the wing cutter*". Appropriate correction is required.

Claims 7 and 8 recite, "*the cutter width*", however claims 7 and 8 depend from claims 4 and 5 which recite the wing cutter, the recitation, "the cutter width"(clms. 7, 8) does not have sufficient antecedent basis as it is not clear which cutter is being referred to, i.e. the cutter of claim 1 or the wing cutter of claims 4 and 5. Appropriate correction is required.

Further because there is no "wing cutter" (clm. 4-6) positively recited, it is not clear how the wing cutter relates to the positively recited elements of the invention. For example, is the wing cutter the same as the cutter recited in claim 1? If not, how does the wing cutter interrelate with the cutter and guide bearing of claim 1. Also, the written disclosure provides no antecedent basis for the term, "*the wing cutter*". Accordingly a clear understanding of the claimed invention cannot be gleaned. Clarification is required to facilitate a clear understanding of the claimed invention and proper application of the prior art. Therefore, claims 4-8 have not been further treated on the merits but are not deemed allowable.

With regard to claims 10-12, "product of" is defined in mathematical terms as at least two numerical values multiplied together. Therefore, it is not understood what is meant by the

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recitation, "the product R of the radius", is not the radius a measured value and determined by the measured value of the diameter of the guide bearing and/or the cutter? Is the product of the radius R multiplied by the square root of 2, if so, what is the product of the radius R?

Clarification is necessary.

For the purposes of examination and as best as can be understood, the Examiner understands a difference to exist between the guide bearing radius and the cutting radius of the router, that difference to be greater than the radius of the guide bearing multiplied by the square root of 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 9 as best as can be understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Pozzo (5,899,252). Pozzo discloses a router cutting for cutting a panel-receiving groove comprising: a shaft for mounting in an electric motor a cutter (21) having a cutting radius mounted on the shaft, and a guide bearing (35) having a radius mounted on the shaft, wherein there is difference between the cutting radius and the bearing radius. Pozzo does not explicitly disclose the different between the cutting radius and the bearing radius is greater than the bearing radius multiplied by the square root of 2. Although, Pozzo does not explicitly disclose the different between the cutting radius and the bearing radius is greater than the bearing

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radius multiplied by the square root of 2 such change in size would be an obvious matter of design choice.

In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) held that limitations pertaining to size are not sufficient to patentably distinguish over the prior art. Further *Gardner v. TEC Systems Inc.* 725 F.2d, 1338 220 USPQ 777 (Fed. Cir. 1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and the device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

The prior art reference Pozzo discloses all of the claimed structure except for the relative dimensions of the cutter radius and the bearing radius, however the invention as claimed would not perform any differently than that of the prior art Pozzo, accordingly the claimed invention fails to positively set forth patentably distinguishing structure/subject matter over the prior art Pozzo. The mere selection or calculation of an optimal size/dimension of the radii of both the cutter and guide bearing are well within the general knowledge of a skilled artisan in the art and are not non-obvious.

With regard to claims 2, 3 and 9 as best as can be understood Pozzo does not disclose the guide bearing having an approximately 5/16 inch, 7/16 inch or 10mm diameter or a cutter diameter of 17mm. As noted above, the specific selection of size and/or dimensions is well within the knowledge of a skilled artisan and would result from routine engineering practices and therefore is not non-obvious. Further Applicant's disclosure does not positively set forth any criticality to the diameter measuring 5/16 inch, 7/16 inch, 10mm or 17mm (cutter diameter); thus

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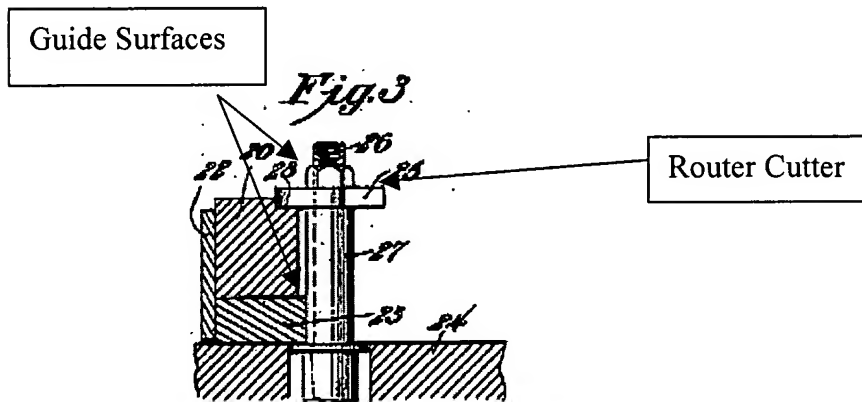
in the absence of any criticality to these dimensions it would have been obvious at the time of the invention to one having ordinary skill in the art to select a diameter for the guide bearing measuring either 5/6 inch, 7/16 inch or 10mm and a cutter diameter measuring 17mm as such requires only routine skill in the art and does not in itself warrant patentability.

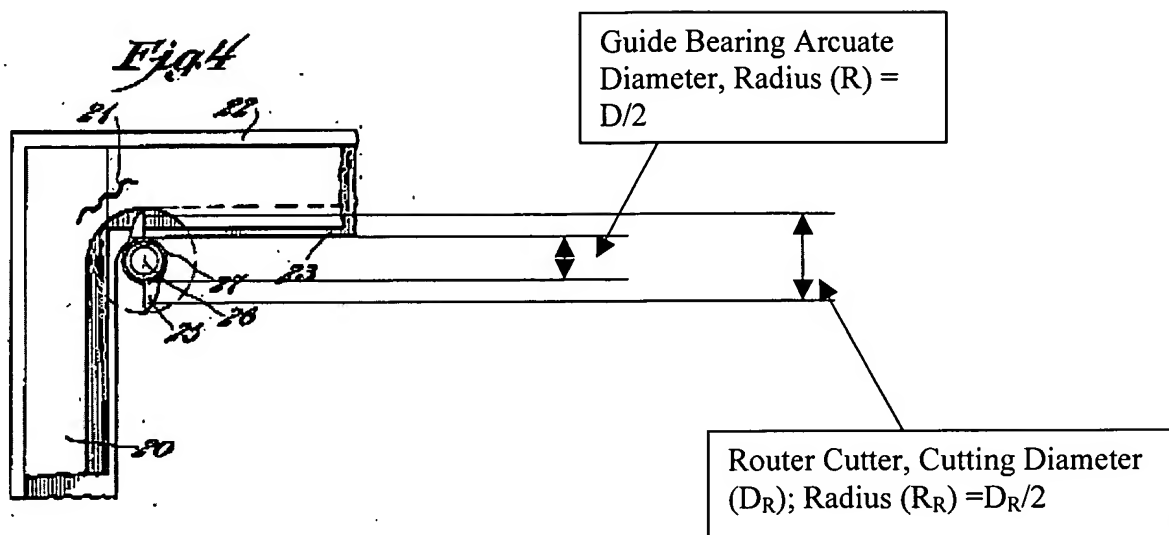
Claim 10 and claims 11-12 as best as can be understood are rejected under 35 U.S.C. 103(a) as being unpatentable over B.S. Vaughan (1,933,232) in view of Hansen (4,505,086). Vaughan discloses a method of cutting a groove to receive a panel in a frame having a plurality of members comprising: a preparing the frame members, temporarily assembly the frame members into the frame manipulating one of the frame or router to cut a continuous groove inside the frame (fig. 2) using a router cutter (25) while contacting the inside face of the frame with an arcuate bearing surface having an arcuate radius R with the arc centered on the cutter axis of rotation (fig. 4). Vaughan does not disclose preparing the frame members by forming joint elements. Hansen teaches in a closely related art a method of cutting a groove in a panel wherein frame members are prepared by forming joint elements in the end of the frame (figs. 9, 11). Because the references are from closely related art, it would have been obvious at the time of the invention to one having ordinary skill in the art to construct Vaughan's frame members by forming joint elements on the end of the frame so as to form the frame as taught by Hansen.

As to the recitation, wherein the cutting diameter of the router cutter is larger than the product of the radius R multiplied by the square root of 2, neither Vaughan nor Hansen disclose such. However it is obvious to the skilled artisan that both Vaughan (figs. 3, 4) and Hansen (fig. 2) have a guide bearing surface having an arcuate surface having a radius that is less than the

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radius of the router cutter. Without a difference between the guide bearing radius and the router cutting radius would lead to an entire surface being trimmed as opposed to a groove being formed in a workpiece, i.e., the guide bearing arcuate surface must have a diameter less than the cutter and therefore a radius less than the cutting radius so as to facilitate groove/shaping cutting.





As noted above with reference to claims 1-3 and 9, *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) held that limitations pertaining to size are not sufficient to patentably distinguish over the prior art. Further *Gardner v. TEC Systems Inc.* 725 F.2d, 1338 220 USPQ 777 (Fed. Cir. 1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and the device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. The relative calculation requiring, the cutting diameter of the router cutting to be larger than the product of the radius R multiplied by the square root of 2, merely as size relative dimension. Because no specific sizes of the radius of either the guide bearing or the router cutter have been positively recited or defined within the written disclosure, Applicant has not set forth any criticality to the size of there elements. Instead Applicant has only stated that there is a relative size dimension between the too, i.e. the guide bearing and the router cutter. Such relative size dimensions are obvious and well known in the art so as to facilitate groove/bevel/chamfer and joint cutting and shaping.

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Furthermore, the determination of the specific size of the relative dimension between the guide bearing and router cutter results from known engineering practices and routine experimentation and does not in itself warrant patentability. Additionally it is also well known in the woodworking and mechanical art to use guide bearings of different sizes in combination with router cutters/bits so as to create a groove having a desired size, width and depression.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelley Self whose telephone number is (571) 272-4524. The examiner can normally be reached Mon-Fri from 8:30am to 5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Derris Banks can be reached at (571) 272-4419. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular and After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on accessing the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SSelf

April 1, 2006